

SECTION 5.06
RETAINING WALLS, ENDWALLS AND STEPS

5.06.01--Description: Under this heading shall be included all concrete and masonry retaining walls, endwalls, steps and other miscellaneous structures.

All such structures shall be built in the locations indicated or directed, conforming to the lines, grades, dimensions and details shown on the plans and in accordance with the provisions of these specifications for the various contract items which constitute the completed structure.

5.06.02--Materials: The materials furnished and used in the work shall be those prescribed herein for the several contract items which constitute the completed structure.

Unless otherwise noted, concrete shall be Class "A" Concrete conforming to Article M.03.01, except that the concrete for steps and copings shall be Class "C" Concrete conforming to Article M.03.01.

5.06.03--Construction Methods: All construction methods for endwalls, retaining walls, steps and other miscellaneous structures shall be in accordance with the detailed requirements prescribed for the construction of the several contract items entering into the completed structure. All requirements relative to concrete structures that are pertinent shall apply equally to work covered by this section.

1--Foundations shall be excavated to the depth shown on the plans, unless the character of the material encountered is such as to require changes, in which case the depth shall be as ordered by the Engineer. Should suitable material not be encountered at depths to which it is practicable to excavate, piles shall be driven or other special treatment employed as the Engineer may direct. Piles shall be driven in conformity with the requirements of the plans and shall be either vertical or battered, as the Engineer may require. Special treatment of foundations shall conform to the requirements of the plans and special provisions; or if not specified therein, shall be as directed by the Engineer and will be classed as extra work or additional work. No construction material shall be placed in any foundation until the Engineer has examined the material encountered and approved its character and the depth of the excavation.

2--Endwalls shall be built in the location and to the dimensions and details shown on the plans; or as ordered, and they shall be neatly and accurately finished, true to the lines and grades given. Pipes shall be of sufficient length to extend to the exposed face of the endwall, and the end shall be finished to provide neat, watertight joints. The ends of pipe culverts which enter endwalls on a skew shall be cut to the angle of the skew; or the short side of the pipe may be built out with adequate forms, if this method is approved by the Engineer.

3--Retaining Walls shall be built in the location and to the dimensions and details shown on the plans or as ordered. Drainage of retained material shall be provided as specified in Section 2.16 and as shown on the plans.

4--Steps shall be built where indicated or directed to the dimensions and details shown on the plans or as ordered and in accordance with the requirements of these specifications.

5.06.04--Method of Measurement: The quantities of the various contract items entering into the completed work shall be determined in accordance with the provisions of the plans and specifications for the several items involved. Only accepted work shall be included, and the dimensions used shall be those shown on the plans, except as modified by the written orders of the Engineer.

5.06.05--Basis of Payment: Payment will be made for the actual quantities of accepted work or materials, measured as provided above, at the contract prices for the several items involved, which prices shall be full compensation for all materials, tools, equipment and labor necessary to the completion of the work.

Concrete for steps and for copings on masonry endwalls or retaining walls will be paid for at the contract unit prices per cubic meter for "Concrete for Steps and Copings" complete in place including all incidental expense. Reinforcement, if used, will be paid for in accordance with the provisions of these specifications for the kind of material involved.

Excavation necessary for the construction of endwalls will be paid for in accordance with Section 2.05.

Excavation necessary to the construction of steps will not be measured or paid for directly, but the cost thereof shall be included in the cost of the concrete item.

Excavation necessary to the construction of retaining walls will be paid for as roadway excavation in accordance with the classification applying to the balance of the project, unless otherwise specified.

There will be no direct payment for the cost of forming keys or construction joints, but the cost thereof shall be included in the cost of the concrete items. Where steel dowels are used, this material will be paid for under the reinforcement item.

There will be no direct payment for forming weep holes through the walls or for the pipe necessary for the purpose, but the cost thereof shall be considered as included in the general cost of the work.

Expansion joints will not be paid for as such, but the various materials entering into their construction shall be paid for at the contract prices for the materials in question, complete in place, including all incidental expense.

Pay Item
Concrete for Steps and Copings

Pay Unit
m³